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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/755,047

01/08/2004

Chee Wai Chia

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EXAMINER

SOWARD, IDA M

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/755,047

Applicant(s)

CHIA ET AL.

Examiner

Ida M. Soward

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11 and 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Applicants' amendment filed January 10, 2006.

Claim Rejections - 35 USC § 112

The rejection of claim 20 has been withdrawn due to the amendment filed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5-8, 10-11, 20-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Roberts et al. (US 2002/0004251 A1).

In regard to claim 1, Roberts et al. teach a light emission device comprising: a lead frame comprising a first lead frame segment 204 and a second lead frame 210 segment, wherein said first lead frame segment 204 comprises a first recess 301, wherein said first recess 301 is a reflector cup; a light source 202 coupled to said first lead frame segment 204, wherein said light source 202 resides at least partially within said first recess 301; a wire bond 211 coupled to said light source 202 and coupled to said second lead frame segment 210; and an epoxy cast 203 encasing said light source

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202, said wire bond 211, and a portion of said lead frame (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claims 3 and 21, Roberts et al. teach the first lead frame segment 204 comprising a second recess 1601 such that the epoxy cast 203 is anchored to the first lead frame segment 204 (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claim 5, Roberts et al. teach the epoxy cast 203 comprises a shaped epoxy portion 401 (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claims 6 and 24, Roberts et al. teach the lead from comprising plating (page 15, paragraph [0144]).

In regard to claims 7 and 25, Roberts et al. teach the epoxy cast 203 comprising a color tinting (page 14, paragraph [0137]).

In regard to claim 8, Roberts et al. teach the epoxy cast 203 being operable to diffuse light from the light source 202 (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claims 10 and 28, Roberts et al. teach the shaped epoxy portion 401 being a dome shape (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claim 11, Roberts et al. teach the light source 202 being a light emitting die (page 13, paragraph [0135]).

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In regard to claim 20, Roberts et al. teach a light emission device comprising: a lead frame comprising a first lead frame segment 204 and a second lead frame segment 210; a light emitting diode 202 coupled to said first lead frame segment 204, said first lead frame segment 204 comprising a first recess 301 such that said light emitting diode 202 resides at least partially within said first recess 301; a wire bond 211 coupled to said light emitting diode 202 and coupled to said second lead frame segment 210; and an epoxy cast 203 encasing said light emitting diode 202, said wire bond 211, and a portion of said lead frame, said epoxy cast 203 comprising a shaped epoxy portion 401 (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claim 22, Roberts et al. teach the first recess 301 being a reflector cup (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claim 23, Roberts et al. teach the shaped epoxy portion 401 being incident to the light emitting diode 202 (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

In regard to claim 26, Roberts et al. teach the epoxy cast 203 being operable to diffuse light from the light emitting diode (Figures 16a and 16b, pages 12-13 and 15-16, paragraphs [0127], [0134], [0156] and [0164], respectively).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 2002/0004251 A1) as applied to claims 1, 3, 5-8, 10-11, 20-26 and 28 above, and further in view of Maeda et al. (US 2004/0104391 A1).

Roberts et al. teach all mentioned in the rejection above.

However, Roberts et al. fail to teach a second wire bond coupled to the first lead frame segment and the light source/light emitting diode.

Maeda et al. teach a second wire bond coupled to the first lead frame segment and the light source/light emitting diode 1 (Figure 2, page 12, paragraph [0180]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the light emission device structure as taught by Roberts et al. with the light emission device having a second wire bond coupled to the first lead frame segment and the light source/light emitting diode as taught by Maeda et al. to provide an electrical connection to the terminal (page 23, paragraph [0325]).

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Response to Arguments

Applicant's arguments with respect to claims 1,3,5-11 and 20-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to light emission devices:

| | |
|-------------------------------------|-------------------------------------|
| Chin (US 6,956,243 B1) | Chin et al. (US 2004/0135162 A1) |
| Hofer et al. (US 2004/0232435 A1) | Hohn et al. (US 2004/0084687 A1) |
| Inoue et al. (US 6,597,019 B2) | Okazaki et al. (US 2002/0014630 A1) |
| Reeh et al. (US 2005/0231953 A1) | Rossner (US 2003/0025449 A1) |
| Sano et al. (US 6,603,148 B1) | Shimizu et al. (5,998,925) |
| Shimonaka et al. (US 6,778,574 B1) | Sonobe et al. (6,054,716) |
| Tatsumi et al. (US 2005/0051788 A1) | Ueda (US 2002/0121644 A1). |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M. Soward whose telephone number is 571-272-1845. The examiner can normally be reached on Monday - Thursday 6:30am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra V. Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMS

March 31, 2006

John M. Sawan
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